

ACCESS AND QUALITY IN HIGHER EDUCATION AND RESEARCH

**Can Ontario afford to support both?
Can Ontario afford not to?**



**COUNCIL OF
ONTARIO
UNIVERSITIES
CONSEIL DES
UNIVERSITÉS
DE L'ONTARIO**

88-02049/

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**Council of Ontario Universities /
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February 1988

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SUMMARY

The universities have documented their financial needs for 1988-89 and have called for an increase in base operating grants of 10.9%. In November the Treasurer announced an increase of only 4.5%. Since 1977 university enrolment has grown by 23%, university research activity by 30%, but government operating grants by only 2% in real terms. Ontario universities have been pushed to the limit in their efforts to maintain teaching and research programmes of quality.

The Ontario government announced special funding in 1987 to assist the universities to accommodate a record high number of applicants for admission. Now a further substantial increase of over 10% has been recorded in the number of high school students applying to university. Significant increases in the participation rate have been noted from rural school boards and among females. This is a clear vote of confidence in the value of post-secondary education and in Ontario's policy on accessibility.

The universities will do their best to meet the aspirations of these applicants, but supplementary funding will be essential. The problems of the longer term, however, are perhaps even more significant and less easily dealt with. Increased retention rates in secondary school will

exert permanent pressure on the universities. Demand for admission could rise by 1990 to a level 20% above that of 1986. Such a situation will require a new dialogue between the universities and the provincial government and a renewal of policy on post-secondary education.

To assist in this process, COU will shortly initiate a major study under the title "Ontario Universities into the 21st Century". The exercise will involve wide consultation with various sectors of Ontario society in their capacity as "stakeholders" in post-secondary education.

The role of universities in assuring the economic competitiveness of Ontario has been stressed by the government, but this role can be successfully assumed only if financial support for universities matches that of our economic partners and competitors. This is not presently the case, as increases in grants per student of 25% to 35% over the past four years characterize many comparable American states, while the figure for Ontario is 5%.

The challenges and problems facing Ontario universities are numerous and complex, and there is no simple solution. The next provincial budget, however, does provide the opportunity to restore their financial health in a way that will permit these challenges to be met with strength and confidence.

ACCESS AND QUALITY IN HIGHER EDUCATION AND RESEARCH

**Can Ontario afford to support both?
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The Council of Ontario Universities welcomes the opportunity to address the Standing Committee on Finance and Economic Affairs. This opportunity comes at a critical moment for many young Ontarians hoping to begin university studies this fall.

Society's expectations of this province's universities have increased steadily during the past decade. Since 1977, student numbers have grown by 23% and research activity has grown by almost 30%.* Over this same period the province's operating support to universities has risen by only 2% in real terms. While universities, by their very nature as institutions committed to academic excellence, have striven to maintain teaching and research programmes of the highest quality, it is clear that their capacity to continue to do so, in the face of yet further increases in demand, has become extremely tenuous.

When applications for university admission grew by 7% this past year the government, in line with its commitment to accessibility, urged the universities to accommodate the greater number of students and promised full funding per student by providing special funds for this purpose.

The government is committed to enhanced accessibility to university education and is willing to provide the necessary funding to ensure that this commitment will not impact negatively on its intention to provide adequate base funding

*Measured in constant dollars per full-time faculty member.

through the basic operating grants envelope. (the Hon. Gregory Sorbara, Minister of Colleges and Universities)

The universities, in their turn, made the necessary adjustments and record numbers of students were admitted. The expectation was and remains that the government would make adequate provision to protect existing levels of service while meeting with full funding any additional expectations it had of the universities collectively.

The financial requirements of Ontario universities for 1988-89 are significant. As identified in the attached brief to the Treasurer (Appendix A) they are:

- 1) +6.2% to maintain existing levels of service with respect to existing enrolment;
- 2) +1.0% to enhance support for the research infrastructure;
- 3) +3.7% to initiate a programme of qualitative improvement, contributing to the realization of the social and economic policy objectives of the government.

In addition, it is noted that fulfilment of the government's earlier commitment to accessibility (to students already enrolled) will require the provision of a further 2.6% increase in basic operating funding.

The universities' capital requirements are also substantial. Under the headings of major repairs and renovations, alterations, deferred maintenance, and new construction, they are estimated to total \$172 million for each of the next five years (Appendix B).

It is in this context of need that the university community viewed with concern the Treasurer's preliminary announcement in November 1987 that basic operating grants were to increase by 4.5% and that a further \$27 million was to be provided for enrolment growth. Now, some three months after the announcement, there is reason for disappointment about proposed funding levels to be accompanied by alarm.

What provides the critical new dimension to the shortfall in funding is the information about a further major increase in the number of young people wishing to attend university in September '88. With more almost all secondary school applications now in, there has been an increase of over 10% in students applying for admission to university. An increase of this scale is the equivalent of the entire first year class at Carleton or Waterloo this past September.

These developments are encouraging and exciting, and represent a clear vote of confidence in both the value of education and Ontario's long-standing policy on post-secondary accessibility. The record high figures reflect an increase in the secondary school retention rate, particularly in rural school districts and among females. The province may be justifiably proud of these developments; it is also challenged by them. They produce fresh problems while aggravating old ones.

The universities will do their best to respond to the aspirations of this cadre of applicants, as they have in the past. However, it will be very difficult for them to absorb such a large number of additional students even if the government agrees to provide additional funds. The university system is already stretched beyond its capacity to offer

quality instruction. If even a limited number of additional students are accommodated, in the short term quality will suffer.

It is the longer term, however, that is more significant. If the increased retention rates in secondary school mean a permanent pressure for expanded enrolment, not a transitory bulge -- and there is evidence to suggest that some of the increase is permanent -- then we must face and resolve major policy issues. An ad hoc year-by-year approach will not be adequate.

If the secondary school retention rate continues to increase as it has done between 1982 and 1986, demand for admission could rise by 1990 to a level about 20% above that of 1986. This increased demand will be exacerbated, albeit on a temporary basis, by the transition, for many university-bound students, from a five-year to a four-year secondary school programme. To meet the expectations of Ontario citizens for university education of the highest quality, a new dialogue must be initiated between the government and the universities. The 5000 additional applicants for September 1988 indicate that the dialogue should begin now.

At the same time the universities of Ontario recognize their responsibility to contribute to meeting the middle and longer term challenges facing post-secondary education and research in the province. The Council of Ontario Universities has begun work on a forum that will address the higher education needs of the province as projected over the next two decades. Under the working name "Ontario Universities into the

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21st Century", this project will involve a series of local and regional meetings. This community input will be followed by a two-day province-wide forum in Winter '89. The focus will be on two specific areas: university instruction and research.

The universities of Ontario are efficient and socially responsible institutions. Their relevance to the quality of life in Ontario has never been questioned. To enhance this efficiency, accountability and relevance while pursuing the larger social and economic objectives of the province is the task they set themselves in this project and for the future.

The essential role of the universities in developing and maintaining the economic competitiveness of Ontario in an increasingly international market has been repeatedly stressed by the present government. This vital link of higher education and research with the larger community is equally well recognized elsewhere among Ontario's present and future trading partners. But one has only to look to the patterns of public university funding in American states against which Ontario would measure itself to discover a radically different policy of financial support. Increases in operating grants per student in the magnitude of 25% to 35% over the past four years are typical of many U. S. jurisdictions, while the comparable figure for Ontario is 5%.

Ontario and its universities are facing a series of interrelated challenges both in the immediate future and in the longer term. The next provincial budget provides an opportunity to alleviate some of the problems associated with substantially heightened student demand for

admission in Fall '88, as well as to rectify the erosion in base funding that the earlier announced increase would entail. The budget also offers an opportunity to establish the fiscal policy framework within which the issues of the middle and long term can be most effectively addressed.

Att.

1988 02 04

ONTARIO UNIVERSITY FINANCIAL REQUIREMENTS FOR 1988-89 A BRIEF TO THE TREASURER

Originally prepared in October 1987 and revised to reflect estimates of inflation contained in
Economic Outlook and Fiscal Review: Ontario 1987
and current information on university enrolment.

Background

The Council of Ontario Universities welcomes the opportunity to again address the Treasurer on the matter of the required levels of financial support for Ontario's universities.

The record of the present government has been an encouraging one. Total operating grants to universities increased by 16.0% between 1985-86 and 1987-88, from \$1.242 billion to \$1.441 billion. While the increase in what might be termed core support (formula and extra-formula grants) has been considerably more constrained (rising only 8.2%), it is acknowledged that the government has committed itself to incorporating a significant component of presently targetted funds into core support in 1988-89.

It would be tempting for some to look at the achievement of the past two years with the sense that many of the challenges which the universities addressed to the present government when it took office had been adequately dealt with. Such a conclusion would be wrong. For offsetting the impact of this increased level of funding have been the combined effects of inflation, the costs of career progress for university staff and enrolment growth. Together these factors consumed more than three quarters (12.1% of the 16.0%) of the increased funding provided to universities, leaving a residual increase in funding of 3.9% for programme enrichment. These residual funds, estimated to be about \$48.5 million, constitute only a small fraction of the additional \$175 million identified by this Council two years ago as the amount required to make essential qualitative improvements in our universities' basic enterprise. Notwithstanding, these additional funds have allowed universities to seize new opportunities to enrich the undergraduate experience and to strengthen the infrastructure which underpins graduate studies and research. An appendix provides some summary details.

The capacity of Ontario's universities to undertake new initiatives is related to the overall financial health of the basic university enterprise. While it is acknowledged that increases in levels of support have been encouraging, they must be seen in the context of 1) the measurable need to protect the existing core, 2) the investment required to meet the Government's objectives for an internationally competitive economic base for Ontario, and 3) the relative priority to be accorded to education in general and to universities in particular in order to achieve these objectives.

Inflation

The measurable need for operating funds is easiest to address since its components have been identified and addressed in previous funding briefs from COU. A principal requirement is provision for inflation: this we address in two ways - provision for salary inflation as it relates to the CPI and provision for non-salary inflation for which we have developed the Ontario University Non-Salary Price Index (OUNSPI). In looking at salary inflation, it must be noted that university salary scales over the past ten years have increased by 73.7%. This contrasts with an increase in the CPI over the same period of 101.5% (see Figure 1). For purposes of this analysis, an estimate of inflation is derived from the Treasurer's statement, **Economic Outlook and Fiscal Review: Ontario 1987**. Converted to a university fiscal year, an increase of 4.8% in CPI is assumed for 1988-89. With respect to non-salary inflation, it was noted some years ago that the particular array of goods purchased by universities was not well reflected in the CPI. For example, between 1977-78 and 1985-86, the cost of library acquisitions increased by 164%, while the CPI increased by 85% (see Figure 2). Devaluation of the Canadian dollar relative to foreign currencies in 1986-87 will have exacerbated this difference. A similar but less extreme observation can be made with respect to prices for scientific equipment which have increased by 111% over the same period. Based on the past relationship between OUNSPI and the CPI, we project that non-salary inflation will be 6% in 1988-89.

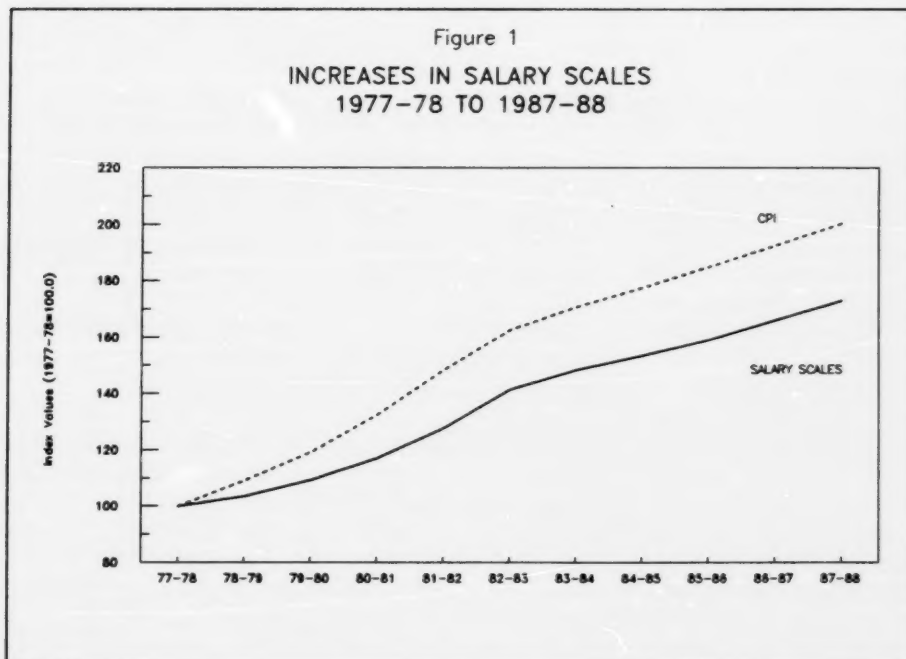


Figure 2
INDEX OF ANNUAL CHANGES IN
COSTS OF MAJOR EXPENDITURES
1977-78 to 1985-86

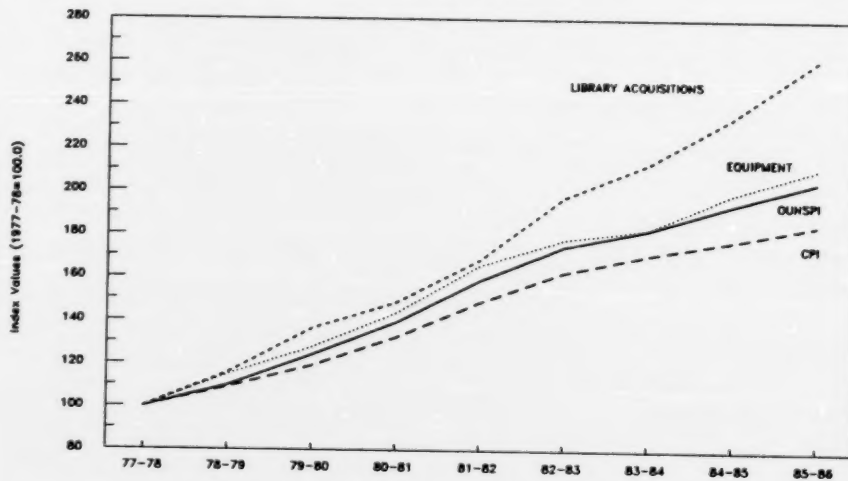
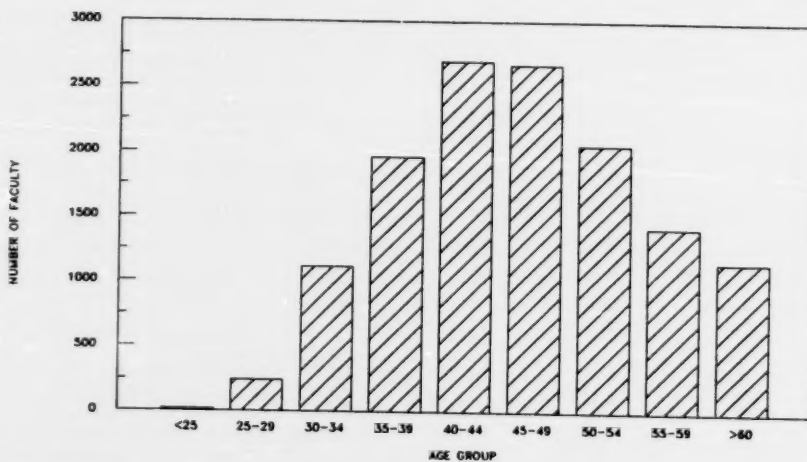


Figure 3
FACULTY AGE DISTRIBUTION
1985-86



Career Progress

A further significant component in projected cost increases for universities arises from the net costs of career progress, i.e. the salary costs associated with movement within scales and with merit and promotion. In theory, such net costs should be zero, with offsetting savings arising from the difference between the salaries of retiring staff and those of newly appointed staff. This would be so in the case of a staff complement uniformly distributed by age. In the case of universities, the rapid growth of complement arising from the massive expansion of universities in the 1960s and early 1970s has given rise to a notably skewed age distribution, with relatively few retirements predicted until the 1990s (see Figure 3). COU has developed a faculty flow model which calculates the net costs of career progress. These are projected to be 1.4% in 1988-89. We note in comparison that the costs of career progress for the Ontario Civil Service for the 1986-87 fiscal year were 2.2%.

Enrolment Growth

The final element in what we have construed as the measurable financial need of universities is provision for enrolment growth. Here, funding will be determined in accordance with the government's announced policy on accessibility and its commitment to fund fully enrolment growth at each institution whose enrolment exceeds 1986-87 levels. 1987-88 enrolment (in terms of basic income units) increased by 2.6% over 1986-87 levels. Funding for this increased enrolment will begin to flow in 1988-89 with a total of about \$39 million being required.

It remains a continuing concern of the university community that the government's generous provision for accessibility should not detract from its commitment to protect the universities' basic enterprise. In this regard, the Minister's statement to the Chairman of OCUA on this matter was particularly reassuring. "The government is committed to enhanced accessibility to university education and is willing to provide the necessary funding to ensure that this commitment will not impact negatively on its intention to provide adequate base funding through the basic operating grants envelope."

Research

We also note that while government has made significant provision in the accessibility fund for increased teaching activity, it has not instituted any mechanism to address overhead cost requirements arising from increases in the volume of research activity. If universities are to remain responsive to demands for greater research output, they need a commitment to a predictable and enhanced level of support for the

research infrastructure. COU believes that these objectives could be attained if the government re-examined the adequacy of its provision for research overheads and undertook a commitment to peg increases in the size of the research overheads envelope to actual growth in research expenditure.

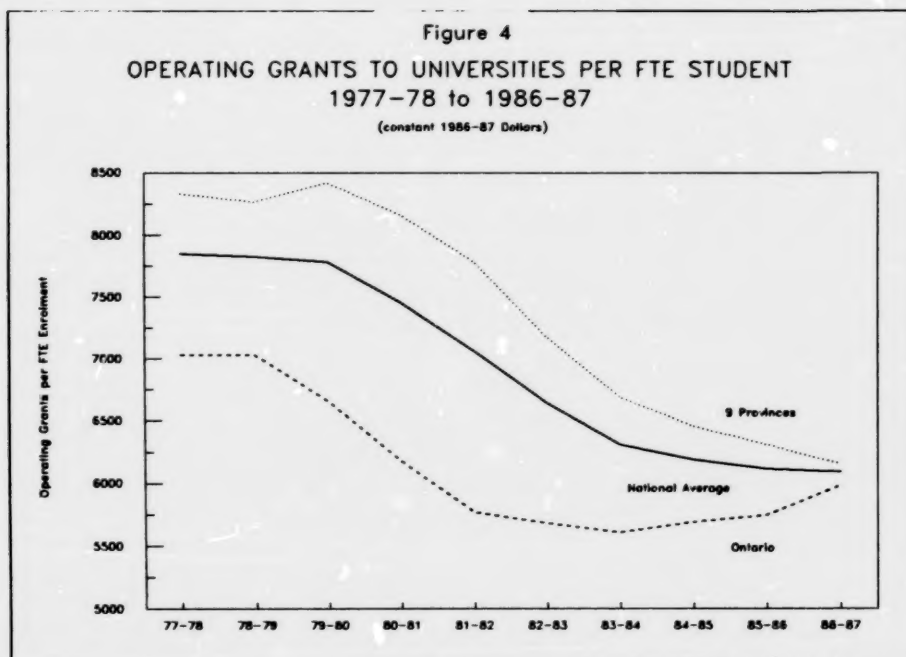
Government Initiatives

A further area in which the universities' core operations need financial protection stems from the growing number of general government initiatives which have a financial impact on universities. Examples from the past include the imposition of provincial sales tax on university expenditures and the significant increase in the cost of statutory benefits over the past ten years.

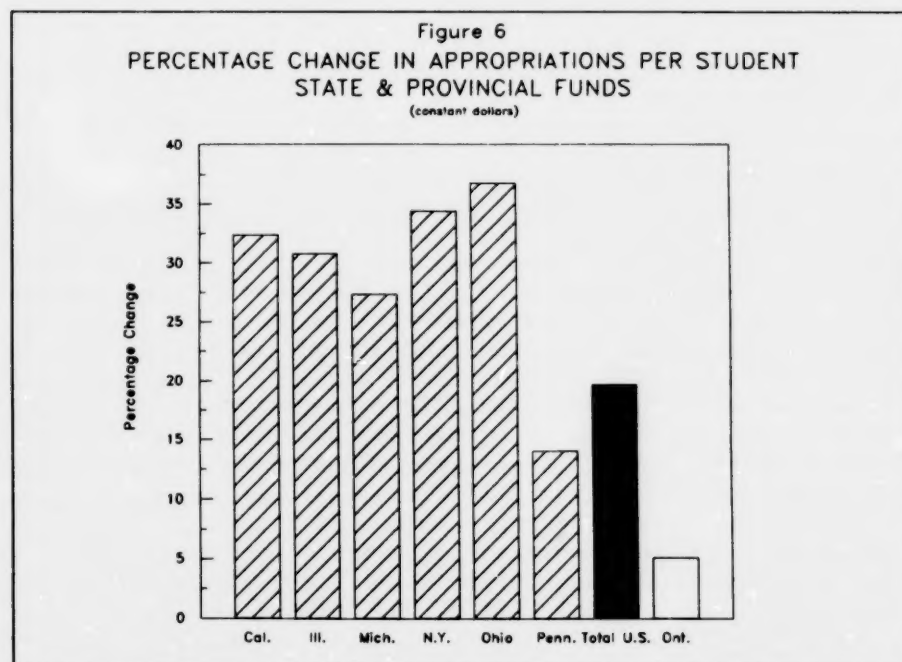
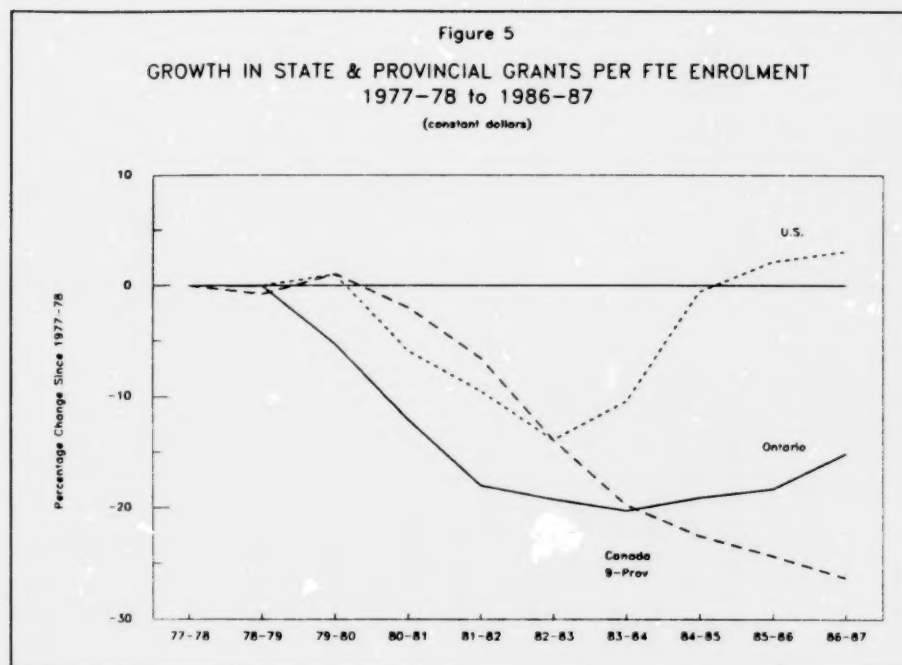
It is difficult to determine in advance what the financial impact of such initiatives will be. The costs of implementing pay equity, for example, will probably not be known with any precision until specific pay equity plans are developed. Similarly, the costs which might arise were mandatory retirement to be eliminated could only be determined over time. By way of further example, however, we anticipate significant additional cost arising from the proclamation of new legislation on the labeling of hazardous substances, the provision of French language services and, generally, on pension reform. Finally, unless the university community is able to achieve a zero rating with respect to the proposed business transfer tax, we anticipate significant costs arising as well from the federal government's programme of tax reform. Universities need some sense of commitment from government that the cost of such general initiatives will be fully recognized in determining overall levels of university support. The alternative, we believe, is to negate any thoughtful approach to university funding. It makes little policy sense, for example, to set accessibility as a general and generously funded goal and then have the funds so provided consumed in meeting some other but unfunded government initiative.

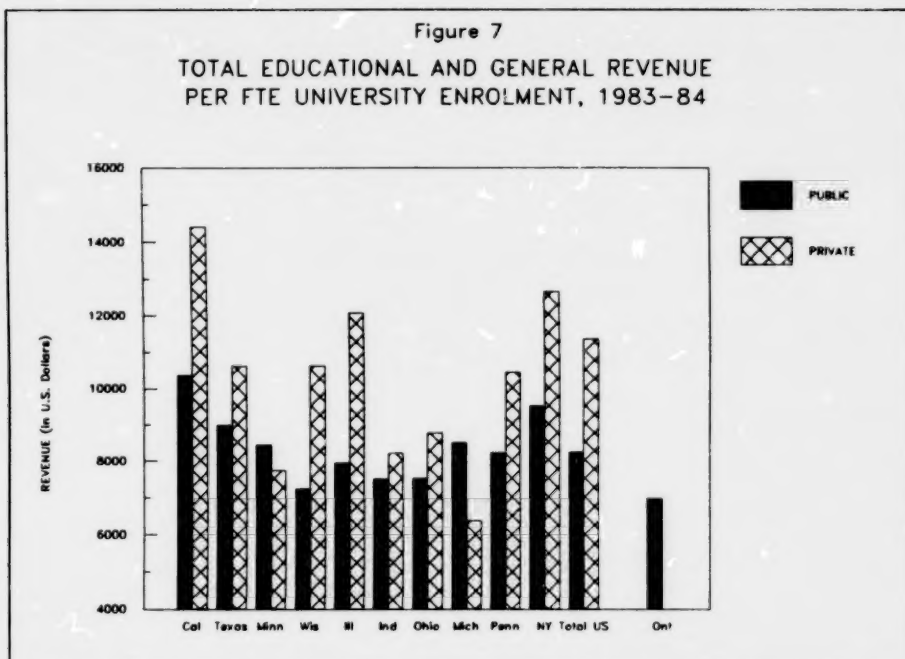
Jurisdictional Comparisons

The funding increases of recent years in Ontario together with the constrained university funding evident in other Canadian jurisdictions have probably combined to bring this province close to the national average of support to universities (see Figure 4). What was once held to be an important goal has thus almost been achieved, but in the interim the stage on which Ontario universities play out their role of contributing to Ontario's health and vitality has broadened considerably. On an international basis, most serious players in the development of information-based high-technology economies have also recognized the importance of universities in creating the intellectual foundation on which their economic advancement will be based.



In this regard, we need look no further than our nearest neighbour for evidence of increasing investment in higher education. Between 1982-83 and 1986-87, state appropriations per student (in constant dollars) in the U.S. have grown by over 20%, while provincial grants per student in Ontario have grown by only 5% (see Figures 5 and 6). In selected state jurisdictions comparable to Ontario in their economic objectives, e.g. California, Illinois, Michigan, New York, rates of increase have ranged from 25% to 35% during this same period. While informative of the general direction of funding of universities in the U.S., these data do not permit measurement of absolute differences in funding per student between Ontario and U.S. jurisdictions. Preliminary work undertaken by COU does show that expenditure per student in the U.S. in 1983-84 was 18% higher than the comparable Ontario figure. It is important to note in addition, however, that these data reflect differences between Ontario and the U.S. prior to more recent major increases in funding in the U.S. (see Figure 7).





Universities as a Priority

Ontario now has a remarkable opportunity to rise to the challenge of making its university community an internationally competitive one. According to the most recent OISE survey of public attitudes, support for universities and for their improved funding is very high. The results of the recent election, to the extent that they endorse the priority afforded by the present government to education, reinforce this attitude of support. The financial position of the province is buoyant and within the province's present fiscal capacity significant latitude exists to reverse the decline in priority experienced by universities over past 10 years. During this period, the universities' share of provincial budgetary expenditures moved relentlessly downward from 5.9% to 4.7%, a decrease which has cost the university community some \$360 million in current annual operating terms (see Figure 8). In each of the past ten years, general government expenditure has grown more rapidly than has its provision for universities (see Figure 9). University operating grants as a proportion of GPP have declined as well (see Figure 10). The decline in priority afforded to universities appears, however, to have been arrested in 1987-88.

Figure 8

Ontario Universities' Share of Provincial Budgetary Expenditures
(Excluding Public Debt Interest Payments)

	Universities' Share	Universities' Annual Shortfall from 1977-78 Level of Government Support	
	%	%	\$ millions
1977-78	5.92	-	-
1978-79	5.87	0.87	4.1
1979-80	5.61	5.22	40.5
1980-81	5.50	7.09	61.1
1981-82	5.18	12.43	127.8
1982-83	5.08	14.22	167.8
1983-84	5.05	14.62	186.4
1984-85	5.04	14.86	202.3
1985-86	4.86	17.91	265.9
1986-87 (estimate)	4.72	20.27	339.9
1987-88 (estimate)	4.73	20.10	358.5

Source: Ontario, Public Accounts, various years.
1987 Ontario Budget

Figure 9

VARIANCE BETWEEN GROWTH IN UNIVERSITY GRANTS
AND PROVINCIAL BUDGETARY EXPENDITURES
1977-78 to 1987-88

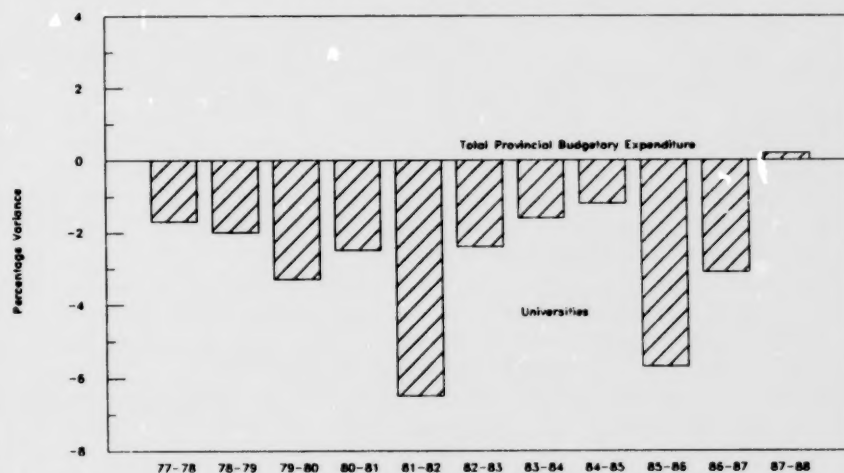
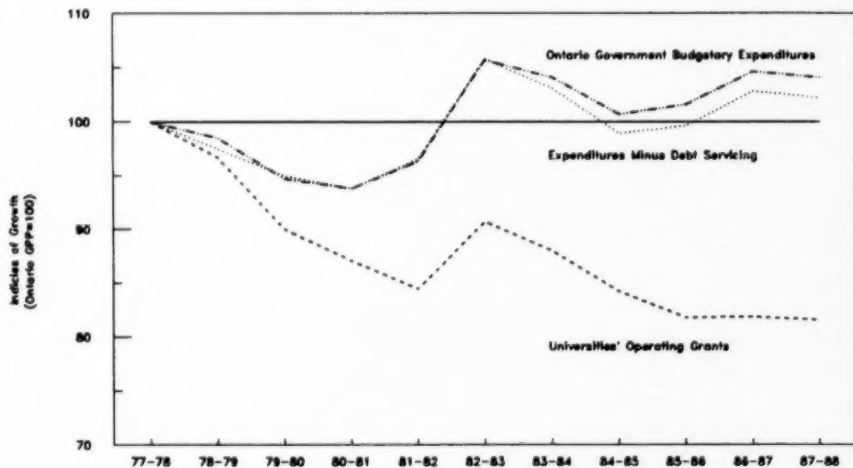


Figure 10
GROWTH IN ONTARIO GPP, GOVERNMENT,
AND GRANTS TO UNIVERSITIES
1977-78 to 1987-88



Conclusion

Despite a sustained period of adversity, Ontario's university community remains strong, with significant potential to contribute to the international competitiveness judged important to the future of this province. In order to do so effectively, however, our universities must now enjoy a sustained period of enriched support with year over year increases in funding well above rates of inflation. The decline in priority cited above must not only be arrested, it must be reversed. In absolute terms, this will prove costly. To do no more than minimally maintain existing levels of service, the universities of Ontario will require a 6.2% increase in funding for 1988-89. In addition, once enrolment levels have been determined for the current academic year, a specific provision for accessibility will have to be made. Finally, it should be acknowledged that the cost of meeting general government initiatives not specifically directed at universities would require additional funding and might be more appropriately dealt with through supplementary budget allocations coincident with or following upon enactment of particular legislation.

Rising to the challenge of international competitiveness is a more difficult issue to address. To this end we make two specific recommendations. First, in order to provide a predictable and enhanced level of support for the research enterprise, we recommend the assignment of a further 1% increase in overall university funding to the research infrastructure envelope and the pegging of the size of the envelope to growth in research expenditures. Second, as a more general and fundamental goal, we recommend that the government commit itself to effecting a real 20% improvement in university funding levels over a five year period. As a start, this implies an additional 3.7% increase in university funding for 1988-89.

In meeting these overall financial objectives, the universities note that they have little latitude themselves to make a contribution of any significance. Only a small fraction (about 2.5%) of overall operating revenues are effectively controlled by universities themselves. In these circumstances, the government may wish to examine the extent to which students in Ontario might contribute to programme enrichment through increased tuition fees.

C.H. Hantho, chairman of the Canadian Manufacturers' Association and chairman and chief executive of C-I-L Inc., recently noted in an article in the Toronto Star -

In this global economy, knowledge has become the primary material and our universities and colleges are as much primary producers as our farms, mines and fisheries.

Education must be the basis of a powerful competitive advantage; no initiative is more important than the revitalization of our post-secondary system of education.

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A Brief Account on the Use of Excellence Funds

The ends to which the excellence funds have been applied by Ontario universities are as varied as the university enterprise itself.

Faculty renewal through the appointment of female academic staff has been a high priority at all universities. 57% of new appointments across the province have been women. Particularly encouraging are those made in disciplines where women have not been well represented in the past. The University of Ottawa, for example, has hired women for its faculties of science and engineering. Excellence funds have also enabled the university to appoint faculty to teach new courses in law and the health sciences in French. Similarly, York University, made female appointments in administrative studies. At Queen's University, faculty renewal money has been combined with other financial resources in the establishment of a national scholars programme. Lakehead University has been enabled to make new appointments relevant to the regional programming needs of north-western Ontario.

In the area of curriculum development, Western has been able to introduce an interdisciplinary programme in women's studies. Other funds have gone toward computer-assisted language learning. York has established a computer-assisted writing centre. As concerns the enhanced delivery of instruction, Laurentian University has been assisted in assuming a leadership role in Contact North, a distance education network for the north. Similarly involving new technologies in teaching, Western is conducting trial instruction via teleconferencing, and has also been able to make additional programmes accessible to the disabled on campus. Wilfrid Laurier University continues its engagement in the provision of additional instructional units through the medium of television. In the area of student services, Ryerson has made two appointments for liaison work with secondary school students interested in post-secondary studies.

A focal point for the investment of new funds in the area of student and faculty support services has been in the automation and computerization of library facilities. Guelph, Lakehead, Laurentian, Western, Wilfrid Laurier, Windsor and York have all used the University Excellence Fund for such purposes. Laurier also used money from the equipment fund to renew its stock of musical instruments, while Western invested in equipment for teaching and research in the health sciences. Ryerson has made a major commitment to a microcomputer graphics laboratory which will support 2000 students in several design-related fields. The Ontario College of Art has made equipment purchases across a broad range of arts and craft fields, for photo-electric art, technological studies, plastics and print-making.

New funding in support of research at Ontario universities has gone to projects and disciplines as varied as communications and biotechnology (Ottawa), mining technology (Laurentian), N.M.R. imaging (Guelph), cartography, social demography, and experimental psychology (Western), thin-film optics, satellite imagery, and northern Ontario ground water patterns (Laurier). Laurentian has created a professorial chair in rock mechanics and ground control, while Queen's has developed a research and teaching laboratory for micro-computer systems. Lakehead made a major investment in a scanning electron microscope that will be employed by a wide range of faculty members.

In reporting on their use of the excellence funds, Ontario universities stressed that the government must commit itself to incorporating such funding into a continuing, coherent and cohesive "Policy of Excellence". Such a goal can best be achieved through enhanced basic operating support rather than with a piecemeal and fragmented set of short-term initiatives. Enriched government support for the core university undertaking must be maintained if this initial investment in excellence is to bear fruit.

REBUILDING ONTARIO'S UNIVERSITIES

The quality of the physical environment within which university teaching and research are conducted is of critical importance to the overall success of the university enterprise. It is also a prime criterion for comparing the strength of universities in Ontario with those elsewhere in Canada and abroad. Today's physical environment is largely a legacy of the 1960s when a massive investment was made in higher education facilities, as enrolments grew rapidly with the encouragement and support of all levels of government. With few exceptions, over the past decade capital stock has not expanded. Nor have adequate sums been spent on maintenance and repair. Meanwhile enrolments have continued to rise. In the period from 1977 to 1986, when enrolment grew by 29%, space available for teaching and research increased by only 9.3%. Enrolment is expected to rise again in 1988-89.

Capital requirements for 1988-89 fall under several headings: major repairs and renovations, alterations, deferred maintenance, and new construction.

Major Repairs and Renovations

The combined physical plant of Ontario universities has a total inventory value of \$4.6 billion. The average age is 23 years. Sound practices would require an average expenditure of 1% per year on major repairs and renovations, \$46 million.

In the current year some \$20 million is being spent for major repairs and renovation. This is an improvement over previous years and represents a significant increase in commitment on the part of the provincial government. This commitment, however, needs to be confirmed, expanded and regularized so that a planned approach may be taken to the enhancement of teaching and research.

Alterations

Alterations are necessary to respond to programmatic and technological change, to make existing space more architecturally efficient and to correct imbalances in existing space type. This requires recurrent funding between 0.5% and 0.62% of building value per annum. The more conservative figure produces an annual requirement for alterations of \$23 million.

Deferred Maintenance

Ontario universities are characterized by a huge backlog of deferred maintenance. The problem is naturally most critical in older buildings. The replacement of one third of all university space older than 50 years, assuming average construction costs of \$2,200 per metre², would require \$106 million over a five-year period, or an annual expenditure of \$21 million.

New Construction

There is also a critical need for new construction to add to existing space inventories to accommodate growing applicant demand, while facilitating new teaching and research initiatives. Council's recently released report on space standards documents the need for additional space in the order of 280,000 metres². While individual universities' requirements are conditioned by institutional objectives of excellence and specialization, this conservative assessment assures that the system would not be overbuilt. Construction costs for such space would be about \$616 million.

The current conventional practice of seeking private sources of support for about one third of total new construction costs may no longer be practical. But assuming such outside support, a five-year programme of new construction would require a minimum of \$411 million in total or \$82 million per year in government support.

The growing body of legislation and regulation related to occupational health and safety also has an impact on universities. Sound capital planning would be facilitated if the cost implications of new initiatives in health and safety code requirements were explicitly recognized in the determination of capital funding allocations for universities.

The minimum requirements of Ontario universities over a five-year period are as follows:

Major repair and renovation	\$230 million
Alterations	115 million
Deferred maintenance	106 million
New construction	<u>411 million</u>
Total	\$862 million

Average annual requirements are \$172 million. This is a substantial sum. Yet government commitment to such a level of funding is a prerequisite for establishing a sound university physical infrastructure. Ontario universities can achieve national pre-eminence and world class status only if they are provided with state-of-the-art tools in a state-of-the-art physical environment.

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